

first, a complex internal shell, divisible into the same principal parts as that of the *Sepia*, but one of which has, secondly, the same essential chambered structure as the shell of the *Spirula*; thirdly, uncinated cephalic arms, as in the *Onychoteuthis*; and lastly, an advanced position of rounded fins, as in the *Spirula* and *Rossia*.

The paper is illustrated by drawings of the specimens described, with microscopic views of the shell and muscular tissue, and a restoration of the Belemnite according to the data afforded by the present fossils.

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April 18, 1844.

The MARQUIS OF NORTHAMPTON, President, in the Chair.

1. Note in addition to Mr. Gassiot's paper on the "Water Battery." The author here describes an instrument which he has recently constructed, and by means of which he is enabled with great facility, and without the aid of Zamboni's pile, to test the tension in a single series of the voltaic battery.

2. "On the production of Ozone by Chemical Means." By Professor Shoenbein, in a letter to Michael Faraday, Esq., D.C.L., F.R.S. Communicated by Dr. Faraday.

The author conceives that of the two gaseous principles which are simultaneously produced during the slow action of phosphorus upon atmospheric air, and which have opposite voltaic characters, that which exerts electro-positive properties is composed of vaporized phosphorus, conjoined with particles of phosphatic acid; and the other, which is electro-negative, is identical with *ozone*, or the odoriferous principle which is disengaged at the positive electrode during the electrolysis of water. His opinion is founded on the odour of the one not being distinguishable from that of the other.

3. "Contributions to Terrestrial Magnetism." No. VI. By Lieutenant-Colonel Sabine, R.A., F.R.S.

This portion of the series consists of observations made on board Her Majesty's ships Erebus and Terror, from June 1841 to August 1842, in the Antarctic Expedition under the command of Captain Sir James Clark Ross, R.N., F.R.S. It comprises the result of the operations conducted during the second year of the expedition, when it proceeded early in July 1841, from Hobartton to Sydney, and thence to the Bay of Islands in New Zealand, remaining there till November, and reaching, in February 1842, in latitude  $78^{\circ}$ , the icy barrier which had stopped their progress in the preceding year. Quitting the antarctic circle in March, and keeping nearly in the 60th parallel, they crossed the whole breadth of the Southern Pacific Ocean to the Falkland Islands, where they arrived in April 1842.

On a general review of the magnetic declination in the southern